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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/937,317	07/09/2013	Julian Richard BARNES	TH3500-US-DIV	2613

23632 7590 04/26/2017

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EXAMINER	
FIGUEROA, JOHN J	

ART UNIT	PAPER NUMBER
1768	

NOTIFICATION DATE	DELIVERY MODE
04/26/2017	ELECTRONIC

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JULIAN RICHARD BARNES,
KIRK HERBERT RANEY, THOMAS CARL SEMPLE,
PAUL GREGORY SHIPAKOFF, and JOHAN PAUL SMIT[1]

Appeal 2016-007740
Application 13/937,317
Technology Center 1700

Before ROMULO H. DELMENDO, AVELYN M. ROSS, and MERRELL C. CASHION, JR., *Administrative Patent Judges*.

ROSS, *Administrative Patent Judge*.

DECISION ON APPEAL[2]

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–12. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Appellants identify the real party in interest as Shell Oil Company. Appeal Br. 2.

[2] In our Decision below, we refer to the Specification filed July 9, 2013 ("Spec."), the Non-Final Office Action dated December 29, 2014 ("Non-Final"); the Final Office Action dated July 16, 2015 ("Final Act."), the Appeal Brief filed November 16, 2015 ("Appeal Br."), and the Examiner's Answer dated June 1, 2016 ("Ans.").

STATEMENT OF CASE

The claims are directed to a composition for enhanced hydrocarbons recovery from hydrocarbon containing formations. Spec. 1. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. An injectable fluid for treating a hydrocarbon containing formation, comprising (a) a hydrocarbon recovery composition comprising a blend of a C_{20-24} internal olefin sulfonate and a C_{24-28} internal olefin sulfonate wherein the weight ratio of the C_{20-24} internal olefin sulfonate to the C_{24-28} internal olefin sulfonate is from about 90:10 to about 70:30; admixed with (b) brine from the formation, wherein the salinity of the brine is from about 2 wt% to about 4 wt%.

REJECTION[3]

The Examiner maintains the rejection of claims 1–12 under 35 U.S.C. § 103(a) as being unpatentable over Morita.[4] Appellants request our reversal of the rejection.

OPINION

The Examiner finds that Morita teaches the claimed composition. Non-Final 4–5. The Examiner finds that Morita generally teaches IOS blends having an IOS with between 10 and 30 carbons and a brine that contains 0.5–12% salt. *Id.* More specifically, the Examiner finds that sample 63 of Morita teaches an internal olefin sulfonate blend comprising an IOS of C_{18-20} and an IOS of C_{25-28}—which meets the requirements of a C_{20-24}

[3] The Examiner withdrew the obviousness type double patenting rejection of claims 1–12 over claims 10–15 of US Application No. 13/382,387. Final Act. 2.

[4] Morita et al., GB 2 135 713 A, published September 5, 1984 ("Morita").

IOS and a C_{24-28} IOS, respectively—in seawater having salinity of 3.5%. *Id.* at 5. The Examiner further finds that Morita teaches that the amount of IOS having 10 to 26 (or 30) carbon atoms should be at least 50% by weight, desirably 60% by weight or more. *Id.* (citing Morita 2, lines 85–89 and 108–113). Therefore, the Examiner reasons that

> it would have been within the purview of one in the art to choose a blend of IOSs having a larger concentration of the IOS component with the higher carbon number chain in proportion to IOSs present in the blend with smaller carbon number chains, in accordance with the teachings in Morita.

Id.

Appellants first argue that Morita fails to teach or suggest the claimed composition for the same reasons the Examiner stated that the prior art does not teach the treatment method claimed in the parent application. Appeal Br. 2. Appellants contend that in the parent case, the Examiner's stated reasons for allowance were that "**Morita fails to disclose the composition used in the method**." *Id.* at 3. Therefore, Appellants assert "[i]f Morita fails to disclose the composition used in the method of the parent case, then it is not clear how the Morita can now disclose the same composition when the composition is the subject of the claims of this application." *Id.* at 4.

Appellants' arguments with respect to the Examiner's reasons for allowance for the treatment method taught in the parent case as relevant to the composition claims of the instant application are not persuasive of reversible error. As the Examiner explains, the invention claimed in the parent case is different, i.e., a method as opposed to a composition. Ans. 6. A method claim is unpatentable where each of the steps of the method are identified or suggested in the prior art. The Examiner notes that the reasons for allowance in the parent case are that Morita "does not teach of suggest

the step currently recited in the present claims, as amended, regarding mixing brine from the formation with its fluid composition prior to its injection." Ans. 7. In particular, the Examiner explains that "the claims in the '168 patent were declared patentably distinct over Morita because the reference did not teach or suggest a *method of treating a hydrocarbon-containing formation* that included *adding to the formation* an IOS surfactant composition that *is admixed with brine recycled from the formation*." *Id.* Thus, these reasons are not relevant to the composition claim rejected here.

Next, Appellants argue that "Morita does not teach the subject matter of the claims of this application that require blends of specific internal olefin sulfonates in specific ratios." Appeal Br. 4. Appellants urge that samples 63 and 64, the only examples teaching a blend of IOS, do not teach a hydrocarbon recovery composition "wherein the weight ratio of the C20–24 internal olefin sulfonate to the C24–28 internal olefin sulfonate is from about 90:10 to about 70:30." *Id.*

Appellants' argument fails to identify error in the Examiner's rejection. As the Examiner finds (Non-Final 4–5; Ans. 9, 11), the broad teachings of Morita encompass the subject matter of Appellants' claims. Morita teaches a composition for oil recovery (Morita 1, ll., 5–15) that includes internal olefin sulfonates having 10–30 carbon atoms (*id.* at 1, ll. 110–15 and 2, ll. 108–13)—including specifically, three internal olefin sulfonates having $C_{20–24}$, $C_{25–28}$, and $C_{18–20}$ (*see id.* at Tables 1–6)—mixed with seawater having a salinity of 3.5% (*id.* at 2, ll. 40–41 and 4, ll. 21–23), where the amount of higher internal olefin sulfonates is "desirably 60% by weight or more" (*id.* at 2, ll. 108–13). Morita also teaches that the

composition may include a blend of two or more of the internal olefin sulfonates disclosed. *Id.* at 6, ll. 10–12 and 8, Table 6. Therefore, the Examiner's findings and conclusions adequately support a prima facie case of obviousness. Moreover, Appellants' argument that sample 63 does not teach the claimed ratio is unpersuasive because the teachings of Morita are not limited to its working examples. *In re Mills*, 470 F.2d 649, 651 (CCPA 1972); *In re Mercier*, 515 F.2d 1161, 1165 (CCPA 1975) ("[A]ll of the relevant teachings of the cited references must be considered in determining what they fairly teach to one having ordinary skill in the art.").

"When an applicant seeks to overcome a prima facie case of obviousness by showing improved performance in a range that is within or overlaps with a range disclosed in the prior art, the applicant must 'show that the [claimed] range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.'" *In re Geisler*, 116 F.3d 1465, 1469–70 (Fed. Cir. 1997) (quoting *In re Woodruff*, 919 F.2d at 1578). Here, however, Appellants present no evidence that the claimed weight ratios are critical and, thus, fail to rebut the prima facie case of obviousness. Ans. 11; *see generally* Appeal Br. Accordingly, we discern no error in the Examiner's findings and conclusions.

CONCLUSION

The Examiner did not err in rejecting claims 1–12 under 35 U.S.C. § 103(a) as unpatentable over Morita.

DECISION

For the above reasons, the Examiner's rejection of claims 1–12 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED